

Site Types Work Group

NACEPT Superfund
Subcommittee

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Phoenix, AZ



Site Types Subgroups


- Future of the NPL
- HRS Issues
- Funding Priorities
- “Mega” Sites

Categories of Issues Considered

- NPL listing - deciding which sites to propose for NPL listing.
- Prioritizing sites on the NPL – what factors and criteria should be considered?
- Mega site issues – how should these sites be addressed?

NPL Listing Subgroup

Analysis and
Recommendations for
Subcommittee
Consideration



NPL Listing Subgroup Objective

- Consider options for the future role of the NPL given the number and types of cleanup sites that may be expected in the future
 - What types of sites belong on the NPL?
 - What criteria should be used to list them considering the universe of sites that need attention?
 - Who should be involved in the listing process?

NPL Listing Subgroup Task

- Develop scenarios to present to full subcommittee regarding the nature of the NPL and the associated screening steps
- Make recommendations on items of consensus (e.g., early screening)

NPL Subgroup Considered

- Early screening
- Scenarios for the NPL
- Other issues
- HRS issues

Early Screening

- Improve early screening
 - Ensure adequate screening for other applicable cleanup programs
 - Provide opportunities for information sharing and community involvement
 - Identify and involve PRPs
- Maintain EPA HQ review of HRS packages to ensure consistency and accuracy

Early Screening – cont'd

- Recommendations don't address variations among states and regions, particularly differences in how and why sites are identified for consideration

Scenarios for the future of the NPL

- Scenario 1 – The NPL is a list of all sites worthy of Superfund status. Period.
- Scenario 2 – The NPL is a list of sites being funded for cleanup through the Superfund program at that moment in time.

Scenario 1 criteria

- Site scores 28.5 or above on HRS
- Site has governor's concurrence
- Site proposed for NPL by state and region

Key Implications (Positive)

- Provides accurate picture of cleanup needs
- May help prioritize funding for cleanup
- Demonstrates need for funding

Key Implications (Negative)

- Size of the NPL would probably increase
- Doesn't address variations in types of sites proposed for listing by states/regions
- Sites could stay on NPL for years w/o action
- Entire process could take longer
- Shifting of monies in process could impact availability of funds for actual cleanup

Key Implications (Negative – cont'd)

- Reduces options of using other federal cleanup programs for sites on the NPL
- Reduces opportunities for collaboration and leveraging monies

Scenario 2 criteria

- Site scores 28.5 or above on HRS
- Site has governor's concurrence
- Site proposed for NPL by state and region
- Site passes screening by EPA HQ to ensure available funding for cleanup

Key Difference Between Scenarios

- Under scenario 2 -- Initiate EPA HQ level screening of NPL-candidate sites to set priorities among eligible sites and limit the number of fund-lead sites placed on the NPL to ***only the highest priority sites based on the ability to pay for response actions at those sites.***

Key Implications (Positive)

- Size of NPL will probably decrease over time
- Would provide tangible list of national cleanup priorities and account for some variation in state and regional approaches to listing decisions
- Fewer sites would likely lead to shorter time on the NPL

Key Implications (Positive –cont'd)

- Review at the highest level (EPA HQ) should provide opportunity to identify other potential sources of funding
- May encourage the use of other cleanup programs for sites left off the NPL

Key Implications (Negative)

- Indefinite status for sites not selected in any given year could lead to:
 - Uncertainty over when and if cleanup will occur
 - Continued exposure to unacceptable risks
 - Reluctance by PRPs to work with state voluntary cleanup programs
 - Adverse effects on NRDA processes and other enforcement actions

Key Implications (Negative – cont'd)

- Provides a false sense of the size of the cleanup universe
- Does nothing to relieve funding shortfalls and indeed may lead to decreased appropriations
- May lead to sites w/o clear alternative for cleanup

Outstanding Issues

- Governor's Concurrence
 - Does this prevent the listing of high-risk sites?
 - Does EPA policy warrant review and change?
- Reduction in number of sites created
 - Are there ways to aggressively monitor prospective sites and sites that have been proposed, but not listed?
 - Are there ways to strengthen prevention programs?
 - Can financial assurances be strengthened?

Summary of Key Points

- Group consensus on ways to improve early screening
- Policy choices for Subcommittee consideration in the scenarios include:
 1. Should sites on the NPL compete for funding? or
 2. Should sites compete to get on the NPL?

NPL Discussion

- Early screening
- NPL Scenarios
- Other issues

HAZARD RANKING SYSTEM

UPDATE

ISSUES RAISED

- Does the HRS need to be revised to address sites where the primary risk is due to vapor intrusion?
- Does the HRS need to be revised to address UXO (Unexploded ordinance)?
- Does the HRS need to be revised to enable EPA to list sites that are not located near major population areas?

Issues cont.

- Does the HRS need to be changed to enable EPA to list sites that pose a threat to exposed individuals with traditional lifestyles?
- Does the HRS need to be changed, or the 28.5 level raised, because the current system does not screen out sites that do not pose a serious threat ?

Vapor Intrusion

- EPA believes HRS is sufficiently flexible to address this pathway.
- No site has been proposed to date based solely on vapor inhalation.
- EPA is looking at NPL sites to determine whether vapor inhalation is a prevalent issue.
 - Results expected within 2 years

UXO

- EPA policy is that UXO is primarily a safety issue; therefore, it would generally be addressed through removals.
- UXO is not included in current HRS.
- Not clear whether need exists to list based solely on UXO threat, as opposed to related contamination.

Sparsely Populated Areas

- Sites with as few as 4 exposed receptors can be listed if there is a high volume of waste.
- If aquatic food chain exposure exists, there is no minimum receptors required.
- If volume of waste is unknown, approx. 22 receptors would be needed to rank.

Traditional Lifestyles

- Primary issue is not ranking system, but exposure data to plug into model, e.g.,
 - chewing reeds for basket making
 - ceremonial uses of plants and other resources
 - sweat lodges with contaminated water
 - dependence on subsistence food, i.e., hunter/gatherer
 - other cultural values, experiences

EPA Initiative

- EPA has explored issues with tribal organizations, and is interested in pursuing further.
- Jason and Steve Caldwell are exchanging information to move dialogue along
- Significant resources will likely be required to research unique exposure scenarios.

Model too sensitive?

- Degree of threat to be captured by NPL is a policy call.
- HRS, as revised in 1990-1, captures approximately the same level of risk as the previous model did.
- Revised HRS includes sites where risks are due to soil pathways, e.g., lead in soils.

Sensitivity cont.....


- Pre-1990 HRS resulted in 8% of CERCLIS sites achieving 28.5.
- Revised model results in 10%, but includes soils sites.

Additional Considerations

- Some of the issues being raised now, e.g., vapor intrusion, tribal exposures, were not envisioned in HRS rulemaking, but it may be flexible enough to accommodate new knowledge.
- HRS is a regulation. Any changes would need to be re-promulgated.
- Last revisions cost \$16 to 19 million.

Funding Prioritization Subgroup

Analysis and
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Consideration



Funding Prioritization Subgroup Objective

To provide advice to EPA on how to prioritize one site over another for Remedial Action (RA) funding (or a portion of a site over other portions or other sites) once on the NPL.

Funding Prioritization Subgroup

- Prioritization strategy and set of criteria for funding RA decisions around Fund-lead sites on the NPL.
- Tables summarize proposed criteria to be discussed by the full Subcommittee.
- Narrative discusses how to apply criteria.
- “Laws Memo” used as the starting point for developing recommendations for funding priorities.

Funding Prioritization Qualifiers

- No conclusion as to the funding issue is implied or suggested.
- Resources will never be unlimited.
- Regardless of funding levels, a prioritization process will be necessary for appropriate and defensible decisions.
- Criteria-based prioritization supports transparent decisions that are understandable to impacted and interested parties.
- Sufficient funds is an important factor in determining the overall success of the Superfund program.

Background

- NPL represents a gross form of prioritization based on the knowledge available to the EPA at the time it makes listing decisions.
- As sites move through the Remedial Investigation, Feasibility Study and Remedial Design stages, more information becomes available on which to make decisions.

Background Continued

- In FY 1995, EPA established a priority setting process for making remedial action funding decisions. (January 19, 1996 memo “Remedial Action Priority Setting” from Assistant Administrator Elliott Laws)
- Resulted in the change from a regional to a national prioritization system.
- Applied to large dollar removals and new start remedial action projects where funding was requested for the first time.

Background Continued

- This system includes ranking scheme with criteria and weighting factors to prioritize projects.
- National prioritization panel (from Regional offices and Headquarters) rank projects for “end-of-pipeline” funding decisions--i.e., at the Remedial Action or “commence construction” stage.
- Other priority setting approaches have been applied at other stages in the Superfund pipeline.

Background Continued

- Currently, a number of large, costly and complex sites are concurrently at RA stage
- Difficult choices must be made about the allocation of funds
- Requires a new look at how priorities are set

Resources Reviewed

- January 19, 1996 Elliott Laws memo on Remedial Action Priority Setting
- 2002 Elaine Davies memo re: criteria to establish priority categories for NPL candidates
- Response Action Priority Form
- Background on the RCRA Risk-Based Corrective Action process and the Department of Defense Relative Risk Site Evaluation process
- Federal Facilities Environmental Restoration Dialogue Committee Report on funding and priority setting

Setting Priorities for Cleanup

In reviewing the multiple sources on setting priorities, there was a lot of overlap. The same type of concern is described in different ways. In order to organize, evaluate and compare, categories were developed for a range of issues.

Categories of Prioritization Factors

- Protection of human health
- Protection of the environment
- Certainty and timing of exposure
- Extent, severity or significance of exposure
- Populations with special needs
- Program effectiveness, efficiency and performance, and perception
- Contaminant characteristics, properties, or extent
- Remedy or risk management actions

Prioritization Criteria Tables

- Significant repetition exists
- Future drafts will reduce redundancies

TABLES



Recommendations for Prioritizing Funding of RA's

- Evaluate the prioritization factors as presented in the tables and accompanying narrative for use in setting priorities.
- “current health risk/exposure” (CHRE) should be the most important factor in funding decisions.

Recommendations for Prioritizing Funding of RA's Continued

- For large and/or complex sites, evaluate and prioritize separable and discrete elements individually.
- Allow for funding hot spot treatment and/or source removal projects.
- While it is desirable to remediate a site completely, it is appropriate to defer remediation at portions of site that don't pose CHRE when needs exceed available resources to address CHRE at other sites.

Recommendations Related to Measuring Performance

- Eliminating an exposure pathway that represents CHRE is an important measurement of success even if additional remedial action may be needed.
- EPA should track and cite elimination of exposure pathways.
- EPA should delete separable and discrete elements of an overall site at which such actions are undertaken and successfully concluded consistent with the NCP.
- In determining CHRE - take into account subsistence lifestyles.

Additional Considerations

- Enforcement integrity is an important and valid consideration of the Superfund program and should be a factor in prioritizing funding.
- EPA should have flexibility to fund remedial action that does not pose a CHRE if doing so is essential to the enforcement integrity of the Superfund program.

Cross-Cutting Issues

- EPA should determine, prior to listing, alternate or multi-jurisdictional programs available to address the largest, most costly and most complex sites.
- EPA should consider the impact of current decisions on the adequacy of its downstream resources. Is there a more appropriate method of funding categories of remedial actions which could potentially overwhelm the Superfund program in the future under any funding scenario.

Cross-Cutting Issues


- EPA should Consider (temporary) funding directed specifically to a category of sites that pose “current health risk/current exposure” and a heavy financial burden (e.g. contaminated residential areas) to assure that the overall program’s CHRE scenarios are addressed.

Funding Prioritization Discussion

- Criteria
- Recommendations for how and when to apply criteria
- Cross-Cutting Issues

MEGA SITES SUBGROUP

Analysis and
Recommendations for
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Background

- CERCLA program is challenged by the competing demands exceeding the resources available to address those sites.
- In recent years, the appropriation has not been sufficient to fund every potential cleanup cost. Large, or complex sites that may take years or decades to clean up are reaching resource intensive stages of construction implementation concurrently.

Need for Alternative Approach

...to classifying, listing and addressing these sites.

- The future financial demands on the program at both the Federal and State level;
- the expectations of the stakeholders;
- Obligation to make sure that none of the proposed NPL sites present an imminent and substantial endangerment to people or the environment,

Mega Sites Recommendation

Develop a structured screening process for sites exhibiting prerequisite characteristics prior to listing on the NPL (and perhaps for those sites recently listed):

- Inventory and assess potential organizations and authorities that could contribute to cleanup efforts;
- Analyze potentially discrete elements of a site that could be considered separately either for listing or for action once listed.

Purposes of Recommendation

To balance the following three elements:

- Comprehensive site clean-up, including coordination with other programs
- Cost control
- Assurance that costs would not bias short-term remediation decisions

Step 1 - Evaluate Prerequisite Site Characteristics

Characteristics should be used as an alternative to the term “mega sites” to identify sites for this approach and the rigor with which it is applied:

SIZE - Areal extent of the contamination

USE: - Potential special uses or exceptional value of the natural resource that may require exceptional cleanup costs

- Imperilment of an endangered species
- Subsistence cultures

Prerequisite Site Characteristics Continued

CONTAMINANTS:

- Extent of actual/current human health risks
- Multiple sources of contamination
- Types and complexity of contaminants
- Discontinuous distribution of contaminants and risks

Prerequisite Site Characteristics Continued

PRP Characteristics - Absence of PRP(s) or sites where a PRP is willing to invest in the PRI

COST Considerations:

Total anticipated cost

Potential cost of exposure control (moving people, etc.)

Disposal costs

Time period for cleanup to be accomplished

Step 2 - Inventory

Conduct an inventory of authorities or organizations that could provide support or leverage, including:

- State and federal laws and programs
- Governmental organizations at local, state, and federal levels
- Cross-jurisdictional organizations
- Innovative funding for components of a cleanup

Step 3 – Conduct Preliminary Site Investigation

- Site inspection (SI) program conduct a preliminary Remedial Investigation (PRI) of the site conditions and relative risks, including the identification of the likely outer boundaries of the contamination.
- Go beyond the level of the present SI program but something less than a “full” RI.

Step 4 – Identify Site Components

Based on results of PRI, set priorities among sites and site elements when resources are insufficient to address all activity. Options:

- Site area split into defined hot-spots
- Link PRP's to specific sub-sites rather than entire region, reducing fund-lead area
- Discrete assessment and decision making made more possible
- Coordinate with “One-Clean-up Program” or similar initiatives

Additional Recommendations for Consideration by Subcommittee

- **Categorical Sites** - Identify existing site types (not size alone) that warrant additional scrutiny and recommendations for measures (e.g. financial assurance for mine sites). Develop policy around such sites.
- **Enforcement** - Continued emphasis on enforcement [pursue ALL enforcement avenues (Clean Water Act, RCRA, etc.) and ALL PRPs, not a selective group.]

Implications and Considerations

- Characterization of discrete site priorities early in Superfund process would help to foster realistic expectations on the part of all stakeholders while assuring intent to address risk to human health and the environment.
- Additionally, it would provide a preliminary organizational structure and transparency for managing large and/or complex sites according to manageable site elements in a documented process.

Implications and Considerations

- Such an approach would require that alternative mechanisms for addressing the rest of a site be identified.
- The Subcommittee should explore the alternatives further.

Implications and Considerations

- Review of the non-CERCLA may result in alternatives - better positioning the Agency to approach PRP's with the option of expedited cleanups of hotspot areas through removal orders (with input from state, local authorities, and local community input).
- Establish interim allocation of responsibility for the components of the site amongst the programs/ authorities. Consider listing only a portion of the site.

Implications and Considerations

- It may be desirable to delay the NPL listing decision for the geographic area as a whole pending review of progress in risk reduction through use of the various other authorities and programs that are being applied.

Implications and Considerations

- Inconsistencies among states capacity and use of the NPL.
- Increasing demands on states as a result of long-term “stewardship” requirements.
- The bias toward “permanent” remedies at mega-sites due to limited state resources - may drive cleanup priority decisions.
- Is the NPL the appropriate vehicle for addressing “mega” or “complex” sites?

Proposed Overarching Comment

“The Superfund program is designed to deal with the worst hazardous waste sites in the United States. Currently the resources appropriated to the program by Congress are insufficient to perform all of the work necessary to fully implement the program. With this phenomenon as a backdrop, the NACEPT Superfund Subcommittee has developed a process of prioritizing a number of specific phases of the Superfund process.” Language proposed by Wilma Subra for consideration by the Subcommittee.